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AFRL technologies displayed at space symposium

by Larine Barr, AFRL Public Affairs

COLORADO SPRINGS, Colo. — Space systems playing a vital role in Operation Iraqi Freedom were among the agenda items discussed by government and industry leaders at the 19th National Space Symposium, April 7-10 in Colorado Springs, Colo.

Hosted by the Space Foundation, the event represents all sectors of space – commercial, civil and national security – and annually attracts the space community's senior leadership. With more than 4,000 attendees representing 500 space companies, organizations and agencies, the event set new records this year, a foundation news release reported.

According to Harry M. Brown III, Air Force Research Laboratory Technology Transfer and Corporate Communications Division, the annual event is one of the best opportunities to demonstrate AFRL technology to industry decision-makers. "The symposium gathers influential officials in space policy and research and it's a valuable way to explain our capabilities, latest discoveries and accomplishments," said Brown.

Adrian DeNardo, Air Force Research Laboratory, Propulsion Directorate, explains advances in hypersonic technology to students from Colorado Springs Skyview Middle School during an educational outreach event at the 19th National Space Symposium in Colorado Springs, Colo. (Air Force photo by Rich Garcia)

AFRL set up a special exhibit at the four-day symposium and joined about 120 organizations inside the Boeing Exhibit Center. Representatives from five AFRL directorates and the Air Force Office of Scientific Research were on hand to demonstrate several leading-edge projects to a stream of attendees.

The Directed Energy Directorate displayed a model of the Maui, Hawaii, 3.67-meter telescope, known as the Advanced Electro-Optical System, which is the largest telescope in the Department of Defense, used for research and to gather images of objects in Earth's orbit. The Space Vehicles Directorate provided information on an experimental satellite, called the Communications/Navigation Outage Forecasting System, designed to collect data to help predict communications and navigation outages caused by ionospheric disturbances over the equator.

Spokespersons from the Propulsion Directorate demonstrated a micro-pulsed plasma thruster under development for small spacecraft, and discussed ground tests for a supersonic combustion ramjet (scramjet) that uses conventional jet fuels to reach hypersonic speeds of over Mach 5.

The Sensors Directorate set up its Multiple Unified Simulation Environment/Air Force Synthetic Environment for Reconnaissance and Surveillance system, featuring a three-dimensional battlefield simulation used within the Department of Defense for joint services training. Other displays included samples of chameleon coatings that can morph to their environment and lubricants for satellite and space vehicle materials, developed by the Materials and Manufacturing Directorate. @